

### REMARKS

Claims 1, 2 and 4-12 have been canceled. New claims 13-19 have been added. Thus, claims 13-19 are presented for examination. Support for new claim 13 may be found in original claim 1, and in the specification at page 5, lines 7-12. Support for new claims 14-19 may be found in canceled claims 2-7. Thus, no new matter has been added. Reconsideration and withdrawal of the present rejection in view of the comments presented herein are respectfully requested.

#### Rejection under 35 U.S.C. § 103(a)

Claims 1, 2 and 4-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hattori et al. (EP 762208). The Examiner dismissed Applicants' unexpected results discussed in their response to the previous Office Action, contending that the only samples tested in the Examples of the present specification included amounts of 35%, 40%, 65%, 71%, 73%, and 75%, but that amounts just below the lower end, and just above the higher end, of the claimed range were missing. The Examiner also noted that the samples tested all comprise the most preferred embodiment, dicyclopentanyl methacrylate, and thus the examples in the present specification are allegedly not commensurate in scope with the present claims. To address these alleged insufficiencies in the showing of unexpected results, Applicant has presented new claims and submitted a Declaration under Rule 132 with additional results.

New claim 13 recites a thick film photoresist composition comprising:

(A) a resin component containing (a) from 61 to 90% by weight of a structural unit derived from dicyclopentanyl (meth)acrylate ester; and (b) a structural unit derived from a radical polymerizable compound containing a hydroxyl group.

Hattori et al. neither teaches nor suggests a resin component which includes the component (a) recited in claim 13. By incorporating from 61 to 90% by weight of the structural unit (a) within the component (A) as presently claimed, the alkali developability of the thick film photoresist composition of the present invention can be improved. As a result, the resolution and adhesion of the composition can be improved, and the level of developing residues can be reduced. In addition, the co-solubility with the component (B) and the organic solvent (D) described below can also be improved. Furthermore, high sensitivity can be achieved even when a thick film resist pattern is formed. The claimed photoresist composition is suitable for forming a thick film resist layer with a thickness of 10 to 150  $\mu\text{m}$ , and preferably from 20 to 120  $\mu\text{m}$ , and

even more preferably from 20 to 80  $\mu\text{m}$ , on top of a substrate (see page 4, lines 18-24 and page 17, lines 10-12 of the present specification). In addition, as previously argued, the unexpected results of using the component (a) in a specific amount is fairly demonstrated by the working examples of the present application.

In support of these unexpected results, Applicants hereby submit a Rule 132 Declaration of Yasushi Washio, one of the inventors of the present application. This declaration demonstrates that the use of (A) a resin component containing (a) from 61 to 90% by weight of a structural unit derived from dicyclopentanyl (meth)acrylate ester as recited in present claim 13 is critical for improving the alkali developability for a negative thick film photoresist composition. As described in the Declaration at pages 5-6, the resist composition containing 73% by weight of dicyclopentanyl methacrylate (sample A), which is within the presently claimed range, exhibited excellent properties with respect to the evaluation factors (adhesion, resolution, developing residues, plating characteristics and removability). In contrast, with respect to the resist composition containing 58% by weight of dicyclopentanyl methacrylate (sample I), which is just outside the lower end of the claimed range, adhesion, resolution, developing residues and plating characteristics were inferior to those of sample A. In particular, sample I exhibited poor resolution. Further, with respect to the resist composition containing 95% of dicyclopentanyl methacrylate (sample J), which is just outside the upper end of the claimed range, the resolution, developing residues, plating characteristics and removability were all inferior to those of sample A. In particular, sample J exhibited particularly poor properties with respect to resolution and developing residues. In addition, with respect to the resist composition containing the same components as those of sample A, except that cyclohexyl methacrylate was used instead of dicyclopentanyl (meth)acrylate (sample K), adhesion and resolution were inferior to those of sample A.

The unexpected results associated with the claimed range of 61-90% of dicyclopentanyl methacrylate are neither taught nor suggested by Hattori et al, nor could these results have been predicted based on the knowledge of one having ordinary skill in the art. These results would effectively rebut any finding of *prima facie* obviousness, if one were present, and strongly support the nonobviousness of the presently claimed invention.

In view of the comments provided above, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §103(a).

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CONCLUSION

In view of the foregoing amendments and remarks, all claims are now believed to be fully in condition for allowance. However, if minor matters remain which could be resolved by teleconference, the Examiner is invited to contact the undersigned at the telephone number provided below. Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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